1: Conzemius M-4, 5 (1921) 1932
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342 Before starting with the construction of a house the Indians cut down all the bush and clear the ground around the site. All the big trees which are liable to endanger the house in case of storms are felled. 364 Refuse is thrown into the water; pigs, dogs, and vultures act to some extent as scavengers. Crude brooms are made from various low 412 shrubs or from the fan-shaped leaves of several species of *Acanthorhiza* palms.

TYPE OF HOUSES.—Both tribes construct rectangular dwellings 342 (M.: *utla;* S.: *o, u*), which are generally rounded on the short sides in the shape of a semicircle; in recent years the regular oblong form has become more common. Among the Miskito of Honduras the elliptical and the circular type are also found.

BUILDING MATERIAL.—No remains of stone houses have been discovered in this area. The dwellings of these primitive tribes are built of perishable material. They consist of four hardwood posts (M.: *playa;* S.: *kal, rahni*) supporting a sharply sloping, well-thatched palm-leaf roof (M.: *bahna;* S.: *tun*). The eaves of the latter reach to within 4 feet from the ground, so that one has to stoop in order to get into the interior. In the primitive Sumu hut there were also one or more central posts (M.: *masa;* S.: *tun rahni*) which were generally elaborately carved. The posts are generally of ironwood (*Dialium* sp.), sapodilla (*Sapota zapotilla* Coville) or cortés (*Tecoma chrysantha* DC.). Several varieties of palms, as the cohune (*Attalea cohune*), skomphra, col de gallo or suita (*Calyptrogyne sarapiquensis*), and caña danta (*Geonoma* sp.) furnish the leaves for thatching. The latter work is made very carefully and a well-made roof lasts from 6 to 10 years without needing any repair. No nails are employed in the construction of the hut, the various parts being held together with strong lianas.

ATTIC.—Most houses are provided with a sort of cockloft, or rude attic, which is immediately under the roof. It is called *tint* by both tribes, perhaps after the English "tent." It is formed by laying split bamboo across the beams, about 7 feet from the ground. Ascent to it is made by means of a tree-ladder (M.: *mina-mañka, yamanmañka;* S.: *kalana*), consisting of a tree trunk wherein notches have been cut. Food is stored in the attic; it is also used as a sleeping apartment.

FIREPLACE.—The fire is made on the leveled mud floor, which is 354 often raised a little to avoid dampness. The hearth (M.: *pauta-wihta;* T.: *kuh-nanañ;* P.: *koh-pani;* U.: *kuh-suruka*) is formed by three logs which are placed so as to form a "Y"; they do not quite touch each other, however, but there is a free space between them, where the fire is made. These three logs (M.: *pauta yuñk;* S.: *kuh-karan, koh suru*) support the cooking vessels; as the projecting ends burn gradually away, these logs have to be pushed forward

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from time to time. There is no chimney in the Indian hut, the smoke (M.: *kyasma;* S.: *wayao*) being allowed to escape through the roof, which consequently presents a dark brown color. This arrangement has the advantage of driving away the mosquitoes.

MODERN HUTS.—In regions where the Indians have had much intercourse with foreigners they have improved their dwellings by the addition of side walls and by a floor of split bamboo or wood; the latter is elevated generally about 3 feet above the ground. The fireplace has then to be transferred to a small adjoining hut. In certain parts near the sea all the dwellings are erected on stilts, as the land is covered with water during the larger part of the rainy season.

In the interior the side walls (M.: *utla klar;* T.: *u dakna;* P., U.: *o itikna*) consist of a wattlework of split bamboo. The Miskito living near the seaside make use of the stem of the papta palm or the leafstalk of the siliko palm, set up vertically in the form of a stockade. This material seldom reaches as high as the roof; it is held in place by horizontally placed poles to which it is loosely tied. The coastal Miskito also employ a curious wickerwork of the split stem of the papta palm for house sides. Mud walls may occasionally be found and have been introduced by Ladinos or by the Black Carib.

Cattle and pigs are kept out of the interior by inserting several sticks crosswise in the doorway (M.: *utla-bila;* S.: *u-pas, o-pas*), or, in the case of an open shed, by building a rudimentary fence around the whole. In the more modern huts there is also a door and several windows, made of a framework of sticks, bamboo, and the like. The Indian dwelling of to-day is generally divided into two compartments of unequal size, the larger serving as living room and kitchen, while the smaller is used as dormitory.

COMMUNAL HOUSES.—Formerly long communal or multiple family houses (palenques) were used by these tribes. Now only the individual family type is met with, which may, however, also be occupied by one or two married children with their respective families. The old communal houses were divided into as many compartments as there were families. Girsewald (22) gives a short description of such a Sumu dwelling from the Waspuk River; it measured 80 feet in length and 40 feet in width and was inhabited by a dozen families. Smaller multiple family houses appear to have been used in former days by the Miskito likewise; M. W. (301) states that Sandy Bay, the most important of their villages in those days (1699), consisted of twelve straggling houses with about 400 inhabitants. Formerly, when the various Indian tribes were continually engaged in wars, this arrangement facilitated the defense of their villages.

2: Kirchhoff E-4 (no date) 1948
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Harpoons with floats attached are used for large fish and for manatees, the latter being taken in the lagoons and at sea. Harpoons with long retrieving lines but without floats are used for sea turtles. The *Sumo* lasso young crocodiles.

Domesticated animals.—No early source mentions dogs, but they are now common. Pigs, sheep, goats, cattle, horses, and cats have been introduced. The people tame a great variety of wild birds and several species of mammals. The latter are even suckled by the women. Species of native bees are kept in hives near the houses.

Food preparation.—Food may be boiled, sometimes in coconut milk. Meat and fish are broiled or roasted in hot ashes, and fish may be fried in coconut oil. The *Paya* fry green pineapple. Salt is used as a condiment but rarely as a preservative. Sauces of red peppers, lime, and salt are made by the *Mosquito*. The *Paya* use chili as a sauce or as a substitute for other food. Tamales are made of manioc. Maize dough, sometimes soured (*Mosquito*), is wrapped in leaves and baked. This and manioc dough may be made into tortillas, an item introduced into the region only in recent years. Manioc is made into bread, which is baked in the open fire.

Numerous beverages are made of liana sap, maize, honey, green plantains, and the like. Some of these are made of a sour paste, which is diluted with water before it is eaten. Such food is usually carried while traveling. Alcoholic beverages are prepared in canoes (*Mosquito*) or log troughs (*Paya*) and stored in earthenware pots. Fermentation is hastened in various ways, notably by chewing uncooked or cooked maize or manioc and spitting it into the mixture.

Preserving and storage of food.—Fish is dried in the sun and meat is dried on a three-legged babracot. The *Mosquito* make a mixture of green bananas and pejibaye palm nuts which may be kept for 6 months or longer. It can be made into a beverage or baked as bread. The *Sumo* preserve boiled maize by steeping it in lye to remove the hull and then burying it. The *Sumo* also make up large parcels of maize or peeled bananas, which are placed in running water until partially fermented, then dried in the sun. Live turtles are kept in stockades in shallow water.

VILLAGES AND HOUSES

Mosquito villages (pl. 35, *bottom*) had between 100 and 500 inhabitants. *Sumo* villages appear to have been much smaller. Formerly, communal houses, called "palenques," had compartments for each family. Some were about 40 by 80 feet (about 12.5 by 25 m.); smaller communal houses were built by the *Mosquito*. *Sumo* houses had an elaborately carved central post. House plans were rectangular, the ends being rounded, elliptical (*Paya*), or circular (*Mosquito* of Honduras). At the present

2: Kirchhoff E-4 (no date) 1948
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342 time rectangular houses with a hip roof used by single families are built. The steep roof, thatched with palm leaves, was supported on posts. All houses have walls about 4 feet (1.3 m.) high. Lofts for storing food and for sleeping are made by laying split bamboo sticks across the beams.

352 Household furniture consists of mattresses of bark or deerskin, platform beds (*Paya* and *Northern Sumo*), sitting hammocks, wooden chests, three- or four-legged stools, and a notched-post ladder. Fires are built [354] of three logs on slightly raised mud platforms inside the houses. Stored 445 near these are cooking pots, bamboo tongs used to remove food from the fire, gourd containers and colanders, wooden spoons, ladles, and sections of bamboo used to haul water and to store beverages.

DRESS AND ORNAMENTS

291 Bark cloth was formerly the most common fabric, but it is now being replaced by cotton cloth, usually obtained by trade. Native cotton cloth was used largely for ceremonial and festive occasions. The *Mosquito* made blankets and clothing of palm fiber.

The male costume consists of a breechclout and poncho. The latter is tied under the arms and secured around the waist with a belt. Everyone went barefoot, but occasionally *Paya* men wore tapir-hide sandals and *Mosquito* men moccasinlike footgear. Women wore a knee-length, wrap-around, bark-cloth skirt, but the upper part of their bodies was nude. Children went nude until they were 8 or 10 years old, when they adopted a breechclout (*Sumo, Mosquito, Paya*). *Sumo* chiefs used a long tunic and a sash, apparently made of cotton. It was dyed and embroidered with crane feathers. These costumes, or modifications of them, are still [177] worn by the more conservative tribes, but commercial cloth is becoming more common and European styles are being adopted.

302 Men cut their hair short, but occasionally elder men left a lock at the back of the crown (*Mosquito*). In about 1850 the *Sumo* tied their hair into a queue, which was oiled or greased; at present they cut it short with bangs over the forehead. A crude comb was made of sticks tied together. Women cut the front hair in bangs allowing the rest to hang freely. The men attached feathers to their hair but women decorated [301] theirs with flowers and colored bands. At time of mourning the hair is cut off short. Both sexes devote considerable attention to their hair.

301 Nose pins and lip and ear ornaments of gold or turtle shell were worn. The *Mosquito* hung shell or brass plates from the lower lip. Conical or bell-shaped lip or chin ornaments were worn by the *Kukra*. Wooden plugs worn in the ear lobes were common. On festive occasions the *Mosquito* and *Sumo* wore either a cotton headband decorated with feathers or a cap made of bamboo decorated with feathers and with long, painted, bark-cloth streamers. The *Mosquito* hung metal or shell plaques and ornaments made of bone and feathers about their necks. *Sumo* women

2: Kirchhoff E-4 (no date) 1948
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PLATE 35.—Sumo and Mosquito Indians, Nicaragua. *Top: Sumo* man. *Bottom: Mosquito* village, Pearl Lagoon. (Courtesy American Museum of Natural History.)

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3: Pijoan D-5 (ca. 1945) 1946
SA15 Mosquito SA15

streams. The villages and their populations were studied from Bilwas Karma to San Carlos. (See map.) The villages themselves are perched up high on the banks so that floods will not carry them away.

Once a house site has been determined the Indians clear the bush and all large trees, that may endanger the house in case of storms, are felled. The house is usually of rectangular design. Four posts or more are used to hold up a sharp sloping thatched palm leaf roof *(bahna)*. In many houses these roofs extend to about five feet off the ground. The posts are usually of ironwood. Several varieties are used for thatching, such as the *cohune (Attalea cohune)*, *skomphora*, *cola de gallo* or *suita (Calyptrogyne sarapiquensis)* and *caño danta (Geonoma* sp.). These palm leaves may last from for to five years as a roof. Although many Indians use nails today, lianas are still used to bind these structures together. The sides of the houses may be made of split bamboo or boards. Most houses have a sort of loft *(tint)* immediately beneath the roof. It is formed by laying split bamboo or boards across the beams and is reached with the use of a ladder. Various forms of bamboo wattlework may make up the interior walls. Most of the dwellings seen have the floor elevated from the ground at a distance of three to four feet. Thus the houses appear to be set on a series of stilts.

Formerly long communal houses or multiple family houses were used by tribes. Today this practice is abandoned and the family type house is what is found. It must be noted, however, that although many houses are raised from the ground, one occasionally encounters a more primitive dwelling where the family live directly on the ground clay with just a low overhanging roof for protection. But this process can only serve as a temporary shelter since the torrential rains would quickly wash away the household effects.

Iron stoves for cooking are common in most houses and in some cases the stove is in a separate house (cookhouse). Many old crates, wooden boxes, and bamboo devices are used for tables and chairs. Beds are made of split bamboo and are raised on posts two to three feet from the floor. Recently hammocks have become popular in the area. They may be purchased from the traders or hand made with cotton, tree bark or Bromelia fibers. Small hammocks are used for children.

Pine wood torches are used for illumination at night and in some cases fiber clusters are impregnated with oils or waxes and lit up. Under the roof the fishing, hunting and agricultural implements are kept.